

REMARKS/ARGUMENTS

In view of the amendments to the pending claims and the following remarks, reexamination and reconsideration of this application, withdrawal of the rejections, and formal notification of the allowability of all claims as presented are earnestly solicited. As detailed in the Office Action mailed February 7, 2006, Claims 1-26 are pending, wherein Claims 15-26 have been withdrawn. In response to the Office Action, the subject matter of Claim 5 has been incorporated into Claim 1, the subject matter of Claim 12 has been incorporated into Claim 8, and Claims 5 and 12 have been cancelled. In addition, Claims 1-3, 7-10, and 14 have been amended to clarify the subject matter being claimed. The amendments to Claims 1-3, 7-10, and 14 find support throughout the Specification and the Drawings, and no new matter has been added. It is believed that the claims now define patentable subject matter over the prior art cited in the Office Action and notice to such effect is requested at the Examiner's earliest convenience.

Claim Rejections – 35 U.S.C. §102

Claims 1-14 were rejected in the Office Action as being anticipated by U.S. Patent No. 4,838,700 to Williamson and U.S. Patent No. 4,334,785 to Blach. In response, Claims 1-3, 7-10, and 14 have been amended, and Claims 5 and 12 have been cancelled, in order to clarify the subject matter being claimed.

More particularly, Claim 1, upon which Claims 2-7 depend, now recites an extrusion auger comprising one or more auger segments that are removable from an auger shaft in a forward direction along an axis of the auger shaft, wherein the removal is facilitated by a pulling tool. Such an auger segment comprises an auger hub defining a bore adapted to engage the auger shaft and an outer surface opposite the bore, wherein the auger hub defines a forward end and an opposed rearward end. At least a portion of a flight is joined to the outer surface of the auger hub. **At least one recess, defined by the auger hub between the forward and rearward ends thereof, extends radially from the bore toward the outer surface, wherein the at least one recess has an engaging surface** facing in a generally axial direction away from the forward end of the auger hub **and a side surface** disposed generally perpendicularly to the engaging surface. **The side surface is adapted to be engaged by the pulling tool to prevent movement thereof**

around the auger hub. The engaging surface is also adapted to be engaged by the pulling tool, whereby **an axial force exerted on the pulling tool outwardly of the auger hub from the forward end pulls the auger segment along the axis of the auger shaft** to facilitate removal of the auger segment from the auger shaft.

Claim 8, upon which Claims 9-14 depend, now recites an extrusion auger comprising one or more auger segments that are removable from an auger shaft in a forward direction along an axis of the auger shaft, wherein the removal is facilitated by a pulling tool. Such an auger segment comprises an auger hub defining a bore adapted to engage the auger shaft and an outer surface opposite the bore, wherein the auger hub defines a forward end and an opposed rearward end. At least a portion of a flight is joined to the outer surface of the auger hub. **At least one recess is defined by the auger hub between the forward and rearward ends thereof and extends radially from the bore toward the outer surface, wherein the recess includes an engaging surface** facing in a generally axial direction away from the forward end of the auger hub **and a side surface** disposed generally perpendicularly to the engaging surface. An access way is defined by the forward end of the auger hub. **The access way extends axially from the forward end to the at least one recess, and is adapted to allow the pulling tool to extend therethrough so as to engage the engaging surface and the side surface. The engagement of the pull tool with the side surface prevents movement of the pulling tool around the auger hub.** The pull tool engages the engaging surface such that **an axial force exerted on the pulling tool outwardly of the auger hub from the forward end pulls the auger segment along the axis of the auger shaft** to facilitate removal of the auger segment from the auger shaft.

The amendments to Claims 1 and 8 find support throughout the Specification and the Drawings such as, for example, from page 6, line 14 through page 7, line 25 of the Specification, and FIGS. 3-5 of the Drawings. As such, no new matter has been added.

The Williamson '700 patent discloses an auger segment with a body 25 and hub 31 that are secured together with a retainer ring 36 and bolts 44. Though the bolts 44 are not intended to be removed, the Office Action alleges that, if the bolts 44 are removed, the threads within the hub 31 for receiving the bolts 44 would provide an engaging surface directed away from the face of the auger segment and engageable by the pull tool. Of note is that the threaded bores in the

hub 31 for receiving the bolts 44 extend longitudinally from the face of the auger segment, and in parallel with the shaft bore of the auger segment.

Figures 1-2b of the Blach '785 patent disclose auger segments bolted together to remove gaps therebetween. In this regard, the Office Action further alleges, as best understood, that the longitudinal bores 40, defined by the work segment 10 outside the work segment bore 16, each include a shoulder 40a that comprises an engaging surface capable of being engaged by the stop surface 42d of the tension rod 42 or a pulling tool upon disassembly. Of note is that the longitudinal bores 40, defined by the work segment 10 and including the shoulder 40a, extend longitudinally from the face of each auger segment, in parallel with the work segment (shaft) bore 16.

In contrast, Claims 1 and 8, as amended, recite an auger segment having at least one recess, defined by the auger hub between the forward and rearward ends thereof, and extending radially from the shaft bore toward the outer surface, wherein the at least one recess has an engaging surface and a side surface, with the side surface being adapted to be engaged by the pulling tool to prevent movement thereof around the auger hub, and the engaging surface being adapted such that an axial force exerted on the pulling tool outwardly of the auger hub from the forward end pulls the auger segment along the axis of the auger shaft so as to facilitate removal of the auger segment from the auger shaft. That is, the at least one recess, including the engaging surface, is configured to extend from the (shaft) bore toward the outer surface of the auger hub (*i.e.*, radially outward from the (shaft) bore). Accordingly, the Applicants submit that the "engaging surface" alleged in the Office Action to be present in each of the Williamson '700 and Blach '785 patents result from bores that extend longitudinally (*i.e.*, parallel) with respect to the main (shaft) bore of the respective disclosed auger segments. As such, the bores of the Williamson '700 and Blach '785 patents, alleged to include an "engaging surface," do not extend from the (shaft) bore toward the outer surface of the hub, as the at least one recess now recited in Claims 1 and 8 of the present application.

In the alternative, the Office Action alleges that Figures 3-6 of the Blach '785 patent disclose a sealing segment 102 having a bayonet-lock coupling 114 for locking with an adjacent auger segment 100, wherein the coupling member 114 comprises an "engaging surface." In contrast, Claims 1 and 8, as amended, recite an auger segment having at least one recess,

defined by the auger hub between the forward and rearward ends thereof, and extending radially from the shaft bore toward the outer surface, wherein the at least one recess has an engaging surface and a side surface, with the side surface being adapted to be engaged by the pulling tool to prevent movement thereof around the auger hub, and the engaging surface being adapted such that an axial force exerted on the pulling tool outwardly of the auger hub from the forward end pulls the auger segment along the axis of the auger shaft so as to facilitate removal of the auger segment from the auger shaft. That is, the at least one recess includes a side surface that, when engaging by the pulling tool, prevents the pulling tool from moving around the auger hub. Accordingly, the Applicants submit that the “bayonet-lock coupling members 114” of the Blach ‘785 patent, alleged in the Office Action to include an “engaging surface” **do not** include at least one recess having a side surface adapted to be engaged by the pulling tool to prevent movement thereof around the auger hub, as now recited in Claims 1 and 8 of the present application.

As stated by MPEP §2131, “to anticipate a claim, the reference must teach every element of the claim.” That is, “[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). In this instance, the Williamson ‘700 and Blach ‘785 patents **do not** teach or suggest an auger segment having at least one recess, defined by the auger hub between the forward and rearward ends thereof, and extending radially from the bore toward the outer surface, wherein the at least one recess has an engaging surface and a side surface, with the side surface being adapted to be engaged by the pulling tool to prevent movement thereof around the auger hub, and the engaging surface being adapted such that an axial force exerted on the pulling tool outwardly of the auger hub from the forward end pulls the auger segment along the axis of the auger shaft so as to facilitate removal of the auger segment from the auger shaft, as particularly claimed in amended Claims 1 and 8 of the present application. Thus, in light of these distinctions between the Williamson ‘700 and Blach ‘785 patents, and Claims 1 and 8 now pending, the Applicants submit that amended Claims 1 and 8 are **not anticipated** by, and are therefore patentable over, the Williamson ‘700 and Blach ‘785 patents. Accordingly, the Applicants respectfully request withdrawal of these rejections.

Claim Rejections – 35 U.S.C. §103

Claims 1-14 were rejected as being obvious over U.S. Patent No. 167,061 to Brockett in view of U.S. Patent No. 6216,327 to Hendrian. In response, Claims 1-3, 7-10, and 14 have been amended, and Claims 5 and 12 have been cancelled, in order to clarify the subject matter being claimed, as previously discussed, and no new matter has been added.

The Office Action notes that the Brockett '061 patent discloses an auger with a shaft A and key x for connecting with the auger segments D via the keyway y in the hub C, but **does not** disclose an “engaging surface.” The Office Action further alleges that such an “engaging surface” is disclosed by the Hendrian '327 patent. In this regard, the Hendrian '327 patent discloses a spoke centered puller tab crankshaft damper hub having spokes between the hub (with the hub defining the central bore) and the outer rim, wherein each spoke 60 defines an opening 80 extending axially therethrough, with each opening 80 having a tab 88 that can be engaged by a puller tool to remove the hub from the crankshaft.

In contrast and as previously discussed, Claims 1 and 8, as amended, recite an auger segment having **at least one recess**, defined by the auger hub between the forward and rearward ends thereof, and **extending radially from the shaft bore toward the outer surface, wherein the at least one recess has an engaging surface and a side surface**, with the side surface being adapted to be engaged by the pulling tool to prevent movement thereof around the auger hub, and the engaging surface being adapted such that an axial force exerted on the pulling tool outwardly of the auger hub from the forward end pulls the auger segment along the axis of the auger shaft so as to facilitate removal of the auger segment from the auger shaft. That is, the at least one recess, including the engaging surface, is configured to extend from the (shaft) bore toward the outer surface of the auger hub (*i.e.*, radially outward from the (shaft) bore). Accordingly, the Applicants further submit that the “engaging surface” alleged in the Office Action to be provided by the “tab 88” disclosed by the Hendrian '327 patent results from an opening 80 in a spoke 60, wherein the opening 80 extends longitudinally (*i.e.*, parallel) with respect to the main (shaft) bore of the crankshaft damper. As such, the opening of the Hendrian '327 patent, alleged to include tab 88 as an “engaging surface,” **does not** extend **from the (shaft)**

bore toward the outer surface of the hub, as the at least one recess now recited in Claims 1 and 8 of the present application.

Thus, the Brockett '061 and Hendrian '327 patents, either separately or in combination, **do not** teach, suggest, or provide motivation embodiments of the present invention as now claimed in Claims 1 and 8. As such, the Applicants submit that Claims 1 and 8, as amended, as well as Claims 2-4, 6, 7, 9-11, 13, and 14 which depend therefrom, are patentable over the Brockett '061 and Hendrian '327 patents cited in the Office Action. As such, the Applicants respectfully request withdrawal of these rejections.

Conclusion

In summary, the Williamson '700, Blach '785, Brockett '061, and Hendrian '327 patents, either separately or in combination, **do not** teach or suggest the embodiments of the present invention, as now claimed in Claims 1 and 8. Accordingly, in view of these differences between the Applicants' invention and the Williamson '700, Blach '785, Brockett '061, and Hendrian '327 patents, it is submitted that the present invention, as defined by the pending claims, is patentable over the prior art cited in the Office Action. As such, Claims 1-4, 6-11, 13, and 14 are believed to be in condition for immediate allowance.

In conclusion, for the reasons set forth above, the Applicants submit that all claims now pending are in condition for immediate allowance. Accordingly, notice to such effect is respectfully requested at the Examiner's earliest opportunity.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR §1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,

/Kevin R. Lyn/

Kevin R. Lyn
Registration No. 42,818

Customer No. 00826
ALSTON & BIRD LLP
Bank of America Plaza
101 South Tryon Street, Suite 4000
Charlotte, NC 28280-4000
Tel Raleigh Office (919) 862-2200
Fax Raleigh Office (919) 862-2260

ELECTRONICALLY FILED USING THE EFS-WEB ELECTRONIC FILING SYSTEM OF THE UNITED STATES PATENT AND TRADEMARK OFFICE ON August 4, 2006.